BANGALORE METRO RAIL CORPORATION LIMITED

Driving Bangalore Ahead

TENDER DOCUMENT

FOR

Manufacturing, Supply and Laying of Cable Trough for Reach-3 Extension and Reach-6 (New Line) of Phase-II

TENDER NO. BMRCL/2023-24/OW/WORK_INDENT5

VOLUME 2

FINANCIAL PACKAGE

November 2023

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VOLUME 2: FINANCIAL PACKAGE

PRICED BILL OF QUANTITIES

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1. PREAMBLE TO BILL OF QUANTITIES

Sub: Manufacture, supply and fixing in positions including finishing of cement concrete (with 53 grade OP cement) precast cable troughs of M40 grade with twin and single cell using TMT reinforcement/mild steel bars with precast cement concrete cover slab for the stations, viaducts, crossover locations and jumper locations etc. for traction, signal and telecom cable arrangements for Reach-5 New Line of Phase-II.

1. The bill of quantities shall be read in conjunction with the instructions to tenderers, conditions of contract, Notice Inviting Tenders, technical specifications and tender drawings.

2. The quantities given in the 'Bill of Quantities' are provisional and are given to provide a common basis for tendering. The basis of payment will be the actual quantities of work ordered and carried out, as measured by the contractor and verified by the engineer and valued at the rates in the accepted priced 'Bill of Quantities', where applicable.

3. The percentage above, below or at par amount for various summary sheets shall be quoted in Indian Rupees both in figures and words.

4. The quoted rates are complete in all respects and it will be deemed to have included all plant, tools, machinery, labour, supervision, materials, fuel, oil, consumables, electric power, water, transportation, all leads and lifts, all temporary works, false works, temporary storage arrangements, fencing, watering, lighting, erection maintenance, night working, inspection facilities, safety measures at work sites/casting for workmen and road users, preparation of working drawing, staging, shuttering, form work, stacking yard etc. establishment and overhead charges, labour camps, insurance costs for labour and works, contractor's profit, all taxes, royalties, duties, Cess and other levies and other charges together with all general risks, liabilities and obligations set out or implied in the contract and including remedy of any defects etc. complete excluding GST.

5. Length of the Precast Cable Trough to be provided as per requirement.

6. Cost of reinforcement steel used in works shall be measured and paid separately under relevant item of BOQ.

7. In reinforcement work cutting, bending, placing in position, tying etc. shall not be paid separately. it will be deemed to have included in the quoted price.

8. Providing cement concrete for all works is deemed to be inclusive of the cost towards production of concrete by batching plant, transit mixer, transportation of concrete with all leads and lifts, formwork, shuttering including staging as required, pouring of concrete by pump/tower crane to all heights/depths or other approved means, compaction by vibrators, curing by approved means such as water, steam or curing compound and all labour, tools, plants, machinery required for execution of work complete in all respects including de-shuttering after completion of work.

9. The whole cost of complying with the provisions of the contract shall be deemed to have been included in the quoted rates.

10. General directions and description of works and materials are not necessarily repeated or summarized in the BOQ.

11. The method of measurement of completed work for payment shall be in accordance with the requirements as stated in the individual sections of the technical specifications and standard method.

12. In the defined grade of concrete mix, the first figure defines the strength of concrete and second figure defines the maximum size of coarse aggregates to be used for production of particular concrete mix. e.g. M 40/20 means 'M-40' is the grade of concrete and '20' is the maximum size of coarse aggregate in mm to be used.

13. Tenderer may note that to perform this contract, nothing extra shall be payable on account of field constraints, availability of front, preparation of detailed scheme for taking necessary clearance and approval from the concerned authority and other local bodies etc.

14. Cable troughs shall be fixed for Metro stations after track works and Third rail traction works. cover slabs, however shall be placed in position after laying of the cables in the troughs.

15. The entire cable trough works shall be executed in close co-ordination with the other designated contractors working in the same stretches. the contractor will not have exclusive access and the working front may not be available in a continuous stretch. the cable trough works shall be executed as per the available working front and re-scheduling of cable troughs and cover slabs shall be done by the contractor without any extra cost and no claims shall be entertained what so ever be the reasons.

16. The tender drawing enclosed is an indicative of general size and shape of the troughs and slabs. the size and shape of troughs and cover slabs may vary according to the site requirement during the execution. necessary 'good for construction drawings' shall be issued from time to time during execution without any extra cost and no claims shall be entertained on this account what so ever be the reasons.

17. On award of contract, the contractor will have to provide the detailed working program indicating the mobilization time, monthly productivity rate etc. please note that mobilization to take up the cable troughs and cover slab manufacturing activities should not exceed 20 days from the date of issue of Notice to Proceed.

18. No cracks, honeycombing or damages to the cable troughs and cover slabs are acceptable. in case of damages during the erection of the trough or cover slabs, the same shall be replaced at contractors' own cost. nothing extra shall be payable for the construction materials, recasting, re-erection etc. for such replacement of defective cable troughs or cover slabs.

19. Payment terms:

    a. For the item no. 1 and item no. 2, rates quoted in the respective schedule shall be released @ 50 % of accepted BOQ rates after completion of manufacture of cable troughs and precast cover slabs at factory as per approved drawings duly fulfilling the quality requirement, submission of necessary test reports, safe custody bank guarantee (SCBG) and against insurance & indemnity bond and also certification by the engineer.

    b. 25% of the accepted BOQ rates shall be released after supply and stacking of cable troughs and precast cover slabs at site as per the directions of engineer against indemnity bond and insurance documents towards damage/loss if any occurs before or during fixing in position and also certification by the Engineer.

    c. Balance 25% of accepted BOQ rates shall be released after Laying of cable troughs and cover slabs in position for the entire length and acceptance certification by the Engineer.

    d. For the item no.3 the rates quoted in the respective schedule shall be released @ 75% after laying the cable troughs and cover slabs in position and certification by the engineer and the balance 25% shall be released after completing the entire cable trough fixing work, cable laying and acceptance by the Engineer in all respects.

e. For the item no.5 the rates quoted in the respective schedule shall be released @ 100% after supply and Laying of the Cable Trays in position and certification by the Engineer.

2. BILL OF QUANTITIES

Name of work **Manufacturing, Supply and Laying of Cable Trough for Reach-3 Extension and Reach-6 (New Line) of Phase-II**

Sl. No.	Description of item	Unit	Quantity	Unit Rate, in INR	Total Estimated Amount, in INR
1	**Providing Pre-Cast Trough**				
	Manufacture and supply of cement concrete precast cable troughs with twin and single cell using TMT reinforcement/mild steel bars and M40 Grade concrete with pre-cast concrete cover slab for stations, ramps, viaduct, cross over locations and jumper locations etc. for traction, signal and telecom cable arrangements for extension line of Reach-3 and Reach-6 (New Line) of Phase-II. Rate shall also include the cost of required dosage and admixture in concrete for obtaining required workability as per specifications and approval of Engineer. The cost shall be inclusive of the cost of moulds for pre-cast cable trough work, providing lifting hooks in the cable troughs and also to cover slabs, casting facilities, curing arrangements, all handling, loading, unloading, stacking at site, smooth finishing to the exposed surfaces, pointing etc. complete with all materials, labours, tools, and plants, machineries, complete as per approved drawing, specifications and directions of Engineer Note: 1. Cost of TMT reinforcement steel, mild steel bars or pre-fabricated reinforcement cages used in the work shall be measured and paid separately under item No.2. The quoted price is inclusive of colour finishing if required and nothing shall be payable on this account.				
a	Size: Twin cell cable trough of internal dimension of 350mm*160mm and 150mm*160mm	Rmt	1300.00	1504.80	19,56,240.00

Sl. No.	Description of item	Unit	Quantity	Unit Rate, in INR	Total Estimated Amount, in INR
b	Size: Twin cell cable trough of internal dimension of 350mm*160mm and 150mm*160mm	Rmt	250.00	904.63	2,26,157.50
c	Size: Twin cell cable trough of internal dimension of 200mmx160mm and 150mmx160mm.	Rmt	20000.00	1006.12	2,01,22,400.00
d	Size: Single cell cable trough of internal dimension of 200mmx160mm.	Rmt	500.00	501.31	2,50,655.00
2	**Reinforcement**				
	Providing Thermo-Mechanically Treated bars of grade Fe-550 Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position, binding and anchoring to adjacent members whereever necessary complete as per Design including cost of material, labour, usage charges complete as per specifications. (The laps and wastages shall not be measured separately).	Kgs	330000.00	96.80	3,19,44,000.00
3	**Providing Chicken Mesh**				
	Providing and placing of Chicken Mesh for Pre Cast Cable Trough, including Labour, Materials, Tools, Transportation, loading and unloading etc. complete as per instructions of Engineer.	SqMt	34000.00	20.33	6,91,220.00
4	**Fixing of Cable Troughs**				
	Loading, lifting and placing of cement concrete pre-cast cable troughs and cover slabs of various sizes from the stacks and fixing in position. This is inclusive of movement of cable troughs and cover slabs from anywhere in the stacking place and lifting/lowering at the desired level and providing cement mortar of 1:6 mix as levelling course and curing before placing the cable trough, placing in position to correct line and level, pointing of all joints, fixing of top cover slab after laying of cables in cable troughs with all men, materials and machineries etc. complete as per cable troughs with all men complete as per the requirement and as per directions of the engineer.				

Sl. No.	Description of item	Unit	Quantity	Unit Rate, in INR	Total Estimated Amount, in INR
a	Size: Twin cell cable trough of internal dimension of 350mm*160mm and 150mm*160mm.	RMT	1300.00	477.27	6,20,451.00
b	Size: Single cell cable trough of internal dimension of 350mm*160mm.	RMT	250.00	246.44	61,610.00
c	Size: Twin cell cable trough of internal dimension of 200mm*160mm and 150mm*160mm	RMT	20000.00	319.11	63,82,200.00
d	Size: Single cell cable trough of internal dimension of200mm*160mm	RMT	500.00	136.56	68,280.00
5	**Providing Cable Tray**				
	Fabricating, supply and installation of MS Cable Tray and cover of 16SWG with Hot Dip Galvanized (65 micron) as per Drawing. Including all material, labour, tools, transportation, loading and unloading etc., Complete.				
a	350mm X 75mm	Nos.	200.00	1494.00	2,98,800.00
b	200 mm X 75 mm	Nos.	500.00	739.75	3,69,875.00
c	150 mm X 75 mm	Nos.	700.00	593.94	4,15,758.00
	Total Estimated Cost in INR				**6,34,07,647.00**

FINANCIAL BID PROPOSAL SHEET		
Particulars	**In Figures**	**In Words**
Total Estimated cost (a)	**Rs. 6,34,07,647.00**	**Indian Rupees Six Crores Thirty Four Lakh Seven Thousand Six Hundred and Forty Seven Only**
Quoted Percentage (Tender Premium)	**…….. % (Above / Below / At Par)**	**……. Percentage (Above / Below / At Par)**
Quoted Price (b) (Tender Premium)	**Rs. ……**	**Rupees …….. only**
Total Tender Price = [Total Estimated Cost (a) +/- = Quoted Price (b)]	**Rs. ……**	**Rupees …….. only**

The Tender Total comprises:

Indian Rupees: …… (in figures)

…… (in words)

Note:

1. *The quoted price shall be inclusive of all applicable taxes & duties and Cess under applicable Acts, but exclusive of CGST and SGST as specified under GCC Clause 39. BMRCL will pay the output CGST and SGST on value of supplies/works done as invoiced by the contractor, at rates as per applicable Law.*
2. *The Tenderer shall ascertain all applicable Taxes and Duties under the applicable Acts and shall be included in the quoted price.*
3. *The evaluation and comparison of Tenders shall be made accordingly by BMRCL. No claim will be entertained on this account after acceptance of the Tender or during the currency of the Contract.*
4. ***Income Tax (IT) deduction:** As per the prevailing rate, IT shall be deducted and remitted to the Income Tax authorities and Form 16 shall be furnished by BMRCL in proof of remittance to IT Department For availing lower deduction of Income Tax, necessary certificate for each financial year issued by the Income Tax Authority shall be furnished by the Contractor, failing which IT at the maximum rate will be deducted.*
5. *The Tender is a **Percentage Tender**. The Cost of all the individual items shall be computed for the entire work and the Tender Premium (above or below or at par) on the Total (Estimated) cost shall*

be quoted. Any additional item/s not found in the BOQ and if it is required to be executed for completion of the work under this Contract, the rate for which shall be as per KPWD schedule of Rates of the respective year above or below Tender premium which the BMRCL has accepted. If the item required is not found in any of the schedule of Rates of KPWD or CPWD, then rate shall be worked out as stipulated in GCC Clause 35.

6. *The Percentage quoted by the Tenderer shall be fixed for the duration of the Contract and shall not be subject to adjustment on any account.*
7. *Tender submitted with an adjustable price quotation will be treated as non-responsive and rejected, pursuant to ITT Clause 11.4.*
8. *The Contract Price shall be inclusive of all charges of insurance, transportation up to destination, handling, installation, royalties & any other charges leviable and payable by the Contractor under the Contract, or for any other cause and including Tax to be deducted at source and shall be included in the Total Tender Price.*
9. *The Contractor shall be entirely responsible for license fees and any other incidentals incurred until completion of the whole of the Works and handover to the Employer.*
10. *The Contractor shall maintain complete records of duties, other taxes and levies, etc; payable to various authorities in relation to the Works and submit the receipts/records for verification as and when demanded in writing by the Employer.*
11. *Any increase in CGST & SGST shall not be paid in the extended period of Contract for which the Contractor alone is responsible for delay as determined by the Engineer while granting the extension of time". However, this shall not be applicable for "variations".*
12. ***UNPRICED ITEMS***

    Items against which no rate or sum is entered by the Tenderer, whether quantities are stated or not shall be regarded as covered by other rates in the Statement of Prices/Tender Pricing. The Tenderer shall take regard of the actual site conditions and the items entered in the Bill of Quantities. The Tenderer shall price his Tender accordingly and the Percentage quoted (Above / Below / At par) in the BOQ entered shall be full and only price paid for all work performed against that item except as described in the Tender Documents.

13. *BMRCL will consider the above prices for evaluation of Tender only.*
14. *Tenderer shall quote the Tender Premium (Above/Below/At par) on the Total Estimated Cost in the above 'Financial Bid Proposal'.*

SIGNATURE OF THE TENDERER